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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,480	12/07/2004	Albert Maria Arnold Rijckaert	NL 020494	6115

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BRIARCLIFF MANOR, NY 10510

EXAMINER

LOUIE, OSCAR A

ART UNIT

PAPER NUMBER

2112

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/517,480

Applicant(s)

RIJCKAERT ET AL.

Examiner

Oscar A. Louie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/07/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

This first non-final action is in response to the original filing of 12/07/2004. Claims 1-6 are pending and has/have been considered as follows.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Blatter (US-5754651-A).

Claim 1:

Blatter discloses,

- “In response to control signal C, mux 37 selects either, the transport stream from unit 35, or in a playback mode, a datastream retrieved from storage device 90 via store interface 95. In normal, non-playback operation, the data packets comprising the program that the user selected to view are identified by their PIDs by selection unit 45. If an encryption indicator in the header data of the selected program packets indicates the packets are encryption, unit 45 provides the packets to decryption unit 50. Otherwise unit 45 provides non-encrypted packets to transport decoder 55. Similarly, the data packets comprising the programs that the user selected for storage are identified by their PIDs by selection unit

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47. Unit 47 provides encrypted packets to decryption unit 50 or non-encrypted packets to mux 110 based on the packet header encryption indicator information.” (i.e. “storing the stream of encrypted data;” “storing items with decryption information from the stream of messages”) [column 4 lines 44-58].

- “Program Clock References (PCRs) that permit synchronization and decoding of content packets. Upon detection of a timing information packet, that is a packet containing an adaptation field, decoder 55 signals controller 115, via an interrupt mechanism by setting a system interrupt, that the packet has been received. In addition, decoder 55 changes the timing packet destination flag in unit 65 and provides the packet to unit 60. By changing the unit 65 destination flag, unit 65 diverts the timing information packet provided by decoder 55 to the unit 60 buffer location assigned to hold data for use by controller 115, instead of an application buffer location.

Upon receiving the system interrupt set by decoder 55, controller 115 reads the timing information and PCR value and stores it in internal memory.” (i.e. “storing synchronization information linking respective points in the stored stream of encrypted data to respective ones of the items with decryption information”) [column 5 lines 64-67 & column 6 lines 1-11].

- “In recovering a program from a storage medium, a problem occurs if a playback device incorrectly applies the CPSI of a different program. The use of the incorrect CPSI data such as the PMT, may result in erroneous identification and assembly of data packets in the recovery of the program content and produce invalid data for display or processing, for example. This problem may arise, for instance, if a playback device does not apply

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the CPSI of the recovered program or does not recognize that the CPSI has changed and continues to apply the CPSI previously derived for a different program. The likelihood that this may occur is increased if the storage medium contains more than one program. In that case a playback device may cross program boundaries during a trick play or search operation, for example, and continue to apply the CPSI of the previous program. In order to alleviate the problem of applying incorrect CPSI parameters across program boundaries, controller 115 formats the CPSI in step 340 by employing the process of FIG. 4." (i.e. "replaying stored part of the stream of encrypted data in an abnormal temporal pattern") [column 10 lines 52-67 & column 11 lines 1-3].

- "In response to control signal C, mux 37 selects either, the transport stream from unit 35, or in a playback mode, a datastream retrieved from storage device 90 via store interface 95. In normal, non-playback operation, the data packets comprising the program that the user selected to view are identified by their PIDs by selection unit 45. If an encryption indicator in the header data of the selected program packets indicates the packets are encryption, unit 45 provides the packets to decryption unit 50. Otherwise unit 45 provides non-encrypted packets to transport decoder 55. Similarly, the data packets comprising the programs that the user selected for storage are identified by their PIDs by selection unit 47. Unit 47 provides encrypted packets to decryption unit 50 or non-encrypted packets to mux 110 based on the packet header encryption indicator information." (i.e. "retrieving the items with decryption information for the points in said stored part during said replaying") [column 4 lines 44-58].

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- “In response to control signal C, mux 37 selects either, the transport stream from unit 35, or in a playback mode, a datastream retrieved from storage device 90 via store interface 95. In normal, non-playback operation, the data packets comprising the program that the user selected to view are identified by their PIDs by selection unit 45. If an encryption indicator in the header data of the selected program packets indicates the packets are encryption, unit 45 provides the packets to decryption unit 50. Otherwise unit 45 provides non-encrypted packets to transport decoder 55. Similarly, the data packets comprising the programs that the user selected for storage are identified by their PIDs by selection unit 47. Unit 47 provides encrypted packets to decryption unit 50 or non-encrypted packets to mux 110 based on the packet header encryption indicator information.” (i.e. “combining the retrieved items with decryption information with the stream during replay at times selected under control of the synchronization information”) [column 4 lines 44-58].

Claim 2:

Blatter discloses,

- “Packets received by decoder 55 from units 45 and 50 that contain program content including audio, video, caption, and other information, are directed by unit 65 from decoder 55 to the designated application device buffers in packet buffer 60. Application control unit 70 sequentially retrieves the audio, video, caption and other data from the designated buffers in buffer 60 and provides the data to corresponding application devices 75, 80 and 85. The application devices comprise audio and video decoders 80 and 85 and high speed data port 75. Data port 75 may be used to provide high speed data such as computer programs, for example to a computer. Alternatively port 75 may be used to

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output data to an HDTV decoder, for example.” (i.e. “subsampling messages from said stream of messages, only items with decryption information from subsampled ones of the messages being stored”) [column 6 lines 23-35].

- “Program Clock References (PCRs) that permit synchronization and decoding of content packets. Upon detection of a timing information packet, that is a packet containing an adaptation field, decoder 55 signals controller 115, via an interrupt mechanism by setting a system interrupt, that the packet has been received. In addition, decoder 55 changes the timing packet destination flag in unit 65 and provides the packet to unit 60. By changing the unit 65 destination flag, unit 65 diverts the timing information packet provided by decoder 55 to the unit 60 buffer location assigned to hold data for use by controller 115, instead of an application buffer location.

Upon receiving the system interrupt set by decoder 55, controller 115 reads the timing information and PCR value and stores it in internal memory.” (i.e. “the synchronization information linking groups of points in the stored stream of encrypted data to respective ones of the subsampled items”) [column 5 lines 64-67 & column 6 lines 1-11].

Claim 3:

Blatter discloses,

- “Units 45 and 47 employ PID detection filters that match the PIDs of incoming packets provided by mux 37 with PID values pre-loaded in control registers within units 45 and 47 by controller 115. The pre-loaded PIDs are used in units 47 and 45 to identify the data packets that are to be stored and the data packets that are to be decoded for use in

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providing a video image. The pre-loaded PIDs are stored in look-up tables in units 45 and 47. The PID look-up tables are memory mapped to encryption key tables in units 45 and 47 that associate encryption keys with each pre-loaded PID. The memory mapped PID and encryption key look-up tables permit units 45 and 47 to match encrypted packets containing a pre-loaded PID with associated encryption keys that permit their decryption. Non-encrypted packets do not have associated encryption keys. Units 45 and 47 provide both identified packets and their associated encryption keys to decryptor 50. The PID look-up table in unit 45 is also memory mapped to a destination table that matches packets containing pre-loaded PIDs with corresponding destination buffer locations in packet buffer 60. The encryption keys and destination buffer location addresses associated with the programs selected by a user for viewing or storage are pre-loaded into units 45 and 47 along with the assigned PIDs by controller 115. The encryption keys are generated by ISO 7816-3 compliant smart card system 130 from encryption codes extracted from the input datastream. The generation of the encryption keys is subject to customer entitlement determined from coded information pre-stored on the insertable smart card itself (International Standards Organization document ISO 7816-3 of 1989 defines the interface and signal structures for a smart card system).” (i.e. “detecting a transition after which the messages contain decryption information different from decryption information in messages before transition”) [column 4 lines 59-67 & column 5 lines 1-22].

- “Packets received by decoder 55 from units 45 and 50 that contain program content including audio, video, caption, and other information, are directed by unit 65 from

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decoder 55 to the designated application device buffers in packet buffer 60. Application control unit 70 sequentially retrieves the audio, video, caption and other data from the designated buffers in buffer 60 and provides the data to corresponding application devices 75, 80 and 85. The application devices comprise audio and video decoders 80 and 85 and high speed data port 75. Data port 75 may be used to provide high speed data such as computer programs, for example to a computer. Alternatively port 75 may be used to output data to an HDTV decoder, for example.” (i.e. “subsampling at least one of the subsampled messages at a predetermined position relative to the transition”) [column 6 lines 23-35].

Claim 4:

Blatter discloses,

- “The PSI as defined in MPEG systems standard section 2.4.4 comprises four non-encrypted elements or tables of information. These are the Program Association Table (PAT), the Program Map Table (PMT), the Network Information Table (NIT) and the Conditional Access Table (CAT). Each table is formed from data packets that are recognized by a particular PID. The PMT defines the PID labels that identify the individual packetized datastreams that constitute a program. These individual streams are termed elementary streams in the MPEG standard. Elementary streams include datastreams such as video, audio for various languages and caption datastreams. The PAT associates a program number with the PIDs that permit identification and assembly of the packets comprising the PMT. The NIT is optional and may be structured and used to define physical network parameters such as satellite transmission channel frequencies and

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transponder channels, for example. The CAT contains the conditional access information such as encryption codes that govern access to programs that are dependent upon user entitlement.” (i.e. “constructing a list of data pointers to selected parts of the stream of encrypted data, each data pointer being associated with a selected one of the items of decryption information that enables decryption of the encrypted data pointed at by the pointer”) [column 6 lines 61-67 & column 7 lines 1-13].

- “Units 45 and 47 employ PID detection filters that match the PIDs of incoming packets provided by mux 37 with PID values pre-loaded in control registers within units 45 and 47 by controller 115. The pre-loaded PIDs are used in units 47 and 45 to identify the data packets that are to be stored and the data packets that are to be decoded for use in providing a video image. The pre-loaded PIDs are stored in look-up tables in units 45 and 47. The PID look-up tables are memory mapped to encryption key tables in units 45 and 47 that associate encryption keys with each pre-loaded PID. The memory mapped PID and encryption key look-up tables permit units 45 and 47 to match encrypted packets containing a pre-loaded PID with associated encryption keys that permit their decryption. Non-encrypted packets do not have associated encryption keys. Units 45 and 47 provide both identified packets and their associated encryption keys to decryptor 50. The PID look-up table in unit 45 is also memory mapped to a destination table that matches packets containing pre-loaded PIDs with corresponding destination buffer locations in packet buffer 60. The encryption keys and destination buffer location addresses associated with the programs selected by a user for viewing or storage are pre-loaded into units 45 and 47 along with the assigned PIDs by controller 115. The encryption keys are

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generated by ISO 7816-3 compliant smart card system 130 from encryption codes extracted from the input datastream. The generation of the encryption keys is subject to customer entitlement determined from coded information pre-stored on the insertable smart card itself (International Standards Organization document ISO 7816-3 of 1989 defines the interface and signal structures for a smart card system).” (i.e. “determining, during replay, whether replay will access encrypted data in the part pointed at by a particular pointer in said list”) [column 4 lines 59-67 & column 5 lines 1-22].

- “Units 45 and 47 employ PID detection filters that match the PIDs of incoming packets provided by mux 37 with PID values pre-loaded in control registers within units 45 and 47 by controller 115. The pre-loaded PIDs are used in units 47 and 45 to identify the data packets that are to be stored and the data packets that are to be decoded for use in providing a video image. The pre-loaded PIDs are stored in look-up tables in units 45 and 47. The PID look-up tables are memory mapped to encryption key tables in units 45 and 47 that associate encryption keys with each pre-loaded PID. The memory mapped PID and encryption key look-up tables permit units 45 and 47 to match encrypted packets containing a pre-loaded PID with associated encryption keys that permit their decryption. Non-encrypted packets do not have associated encryption keys. Units 45 and 47 provide both identified packets and their associated encryption keys to decryptor 50. The PID look-up table in unit 45 is also memory mapped to a destination table that matches packets containing pre-loaded PIDs with corresponding destination buffer locations in packet buffer 60. The encryption keys and destination buffer location addresses associated with the programs selected by a user for viewing or storage are pre-loaded into

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units 45 and 47 along with the assigned PIDs by controller 115. The encryption keys are generated by ISO 7816-3 compliant smart card system 130 from encryption codes extracted from the input datastream. The generation of the encryption keys is subject to customer entitlement determined from coded information pre-stored on the insertable smart card itself (International Standards Organization document ISO 7816-3 of 1989 defines the interface and signal structures for a smart card system).” (i.e. “upon said determining using the list to supply decryption information from the item associated with the particular pointer”) [column 4 lines 59-67 & column 5 lines 1-22].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blatter.

Claim 5:

Blatter discloses,

- “Packets received by decoder 55 from units 45 and 50 that contain program content including audio, video, caption, and other information, are directed by unit 65 from decoder 55 to the designated application device buffers in packet buffer 60. Application control unit 70 sequentially retrieves the audio, video, caption and other data from the designated buffers in buffer 60 and provides the data to corresponding application

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devices 75, 80 and 85. The application devices comprise audio and video decoders 80 and 85 and high speed data port 75. Data port 75 may be used to provide high speed data such as computer programs, for example to a computer. Alternatively port 75 may be used to output data to an HDTV decoder, for example.” (i.e. “constructing a list of data pointers to selected parts of the stream of encrypted data that contain image frames, each data pointer being associated with a selected one of the items of decryption information that enables decryption of the encrypted data pointed at by the pointer”) [column 6 lines 61-67 & column 7 lines 1-13].

Blatter further discloses,

- “Units 45 and 47 employ PID detection filters that match the PIDs of incoming packets provided by mux 37 with PID values pre-loaded in control registers within units 45 and 47 by controller 115. The pre-loaded PIDs are used in units 47 and 45 to identify the data packets that are to be stored and the data packets that are to be decoded for use in providing a video image. The pre-loaded PIDs are stored in look-up tables in units 45 and 47. The PID look-up tables are memory mapped to encryption key tables in units 45 and 47 that associate encryption keys with each pre-loaded PID. The memory mapped PID and encryption key look-up tables permit units 45 and 47 to match encrypted packets containing a pre-loaded PID with associated encryption keys that permit their decryption. Non-encrypted packets do not have associated encryption keys. Units 45 and 47 provide both identified packets and their associated encryption keys to decryptor 50. The PID look-up table in unit 45 is also memory mapped to a destination table that matches packets containing pre-loaded PIDs with corresponding destination buffer locations in

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packet buffer 60. The encryption keys and destination buffer location addresses associated with the programs selected by a user for viewing or storage are pre-loaded into units 45 and 47 along with the assigned PIDs by controller 115. The encryption keys are generated by ISO 7816-3 compliant smart card system 130 from encryption codes extracted from the input datastream. The generation of the encryption keys is subject to customer entitlement determined from coded information pre-stored on the insertable smart card itself (International Standards Organization document ISO 7816-3 of 1989 defines the interface and signal structures for a smart card system).” (i.e. “using the list to supply decryption information from the item associated with each pointer”) [column 4 lines 59-67 & column 5 lines 1-22].

Blatter does not explicitly disclose,

- “selecting, during replay, the parts of the stream pointed at by pointers in the list.”

However, Blatter does disclose,

- “Packets received by decoder 55 from units 45 and 50 that contain program content including audio, video, caption, and other information, are directed by unit 65 from decoder 55 to the designated application device buffers in packet buffer 60. Application control unit 70 sequentially retrieves the audio, video, caption and other data from the designated buffers in buffer 60 and provides the data to corresponding application devices 75, 80 and 85. The application devices comprise audio and video decoders 80 and 85 and high speed data port 75. Data port 75 may be used to provide high speed data such as computer programs, for example to a computer. Alternatively port 75 may be used to

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output data to an HDTV decoder, for example.” [column 6 lines 61-67 & column 7 lines 1-13].

- Thus, it would have been obvious to one having ordinary skill in the art at the time of the applicant’s invention that the invention would have to select parts of the stream that the “pointers” point to in order for the invention to be realized. Decryption cannot occur within a portion of the stream that contains either no data or data that is not recognized by the “data pointers.”

Claim 6:

Blatter does not explicitly disclose,

- “decrypting the items of decryption information from the incoming data stream and reencrypting the items of decryption information with a recording key prior to storage”
- “storing the reencrypted items of decryption information separately from the stream of encrypted data”

However, Blatter does disclose,

- “The described encryption system is exemplary only. Alternative encryption mechanisms may be employed that involve the storage of different encryption codes or keys for decryption. Other entitlement mechanisms that do not involve the storage of codes do not necessarily require a CAT. In addition, the encryption codes may be incorporated into information tables of the CPSI other than a CAT thereby dispensing with the need for a CAT. For example, the encryption codes may be incorporated into the CA.sub.--descriptor private data section of the PMT (per the MPEG systems standard section 2.6.16). This approach has the advantage of associating the codes directly with

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elementary streams that constitute programs, avoiding the need for a separate directory to link the elementary streams to the codes.” [column 9 lines 57-67 & column 10 lines 1-4].

- Therefore, it would have been obvious for one having ordinary skill in the art at the time of the applicant’s invention to use any widely acceptable encryption and storage of encrypted items method.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to the applicant’s disclosure.

a. Downs (US- 6574609-B1)

b. Gammie (US-5237610-A)

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

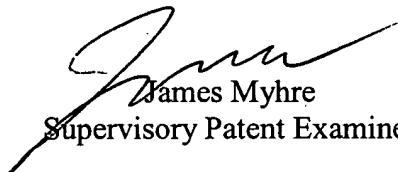
If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, James Myhre, can be reached at 571-270-1065. The fax phone number for Formal or Official faxes to Technology Center 2100 is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OAL
12/19/2006



James Myhre
Supervisory Patent Examiner